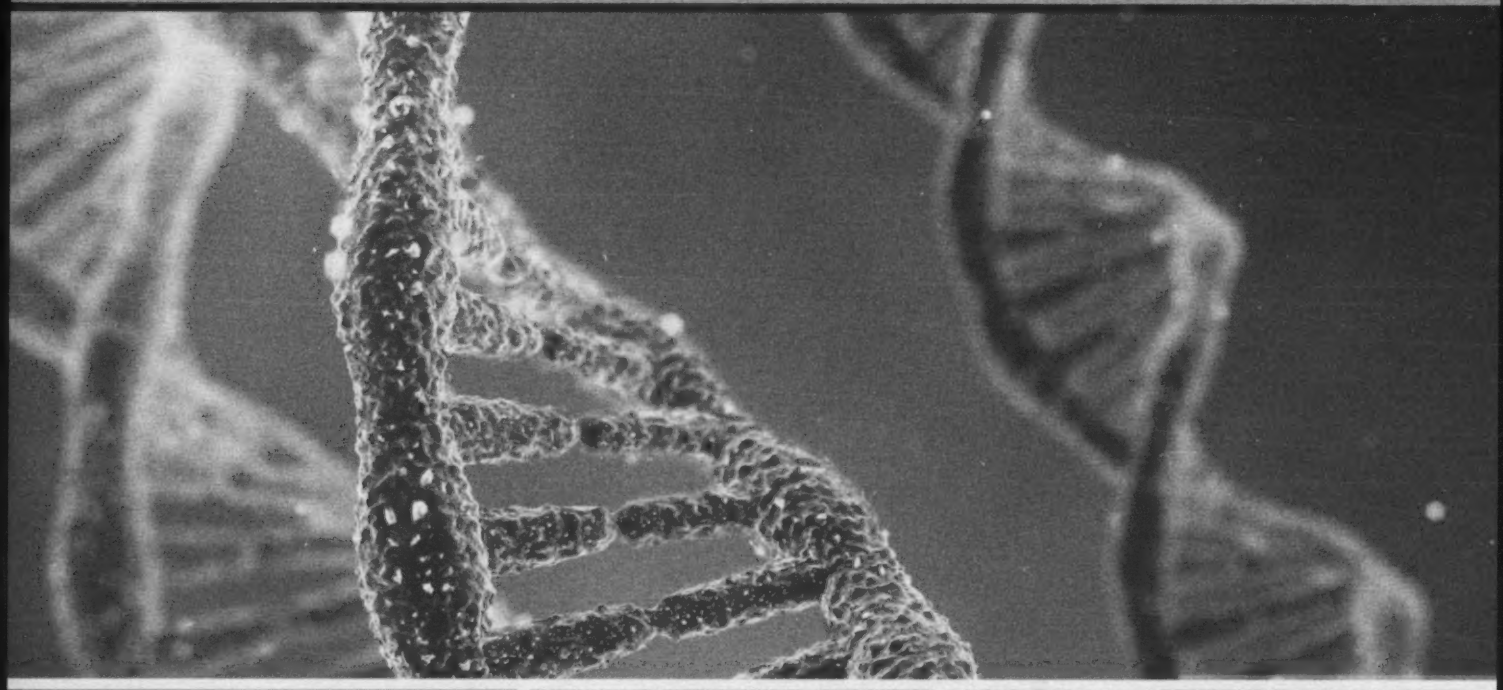
RCMP

ROYAL CANADIAN MOUNTED POLICE

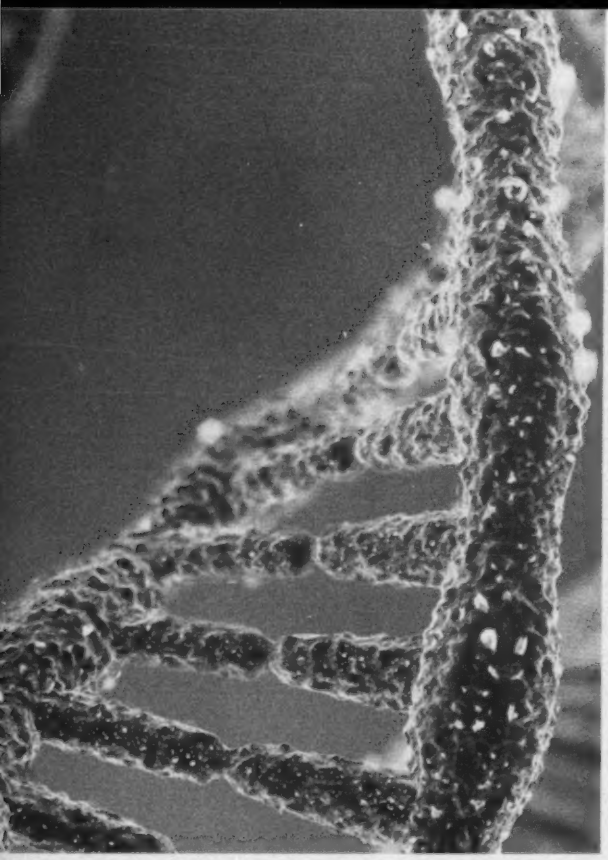


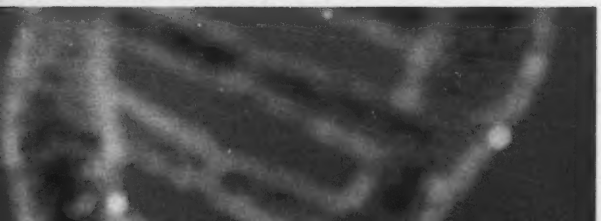
The National DNA Data Bank of Canada Annual Report 2014/2015

More samples, more matches, more crimes solved

Royal Canadian Mounted Police | Gendarmerie royale du Canada

Canada





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NATIONAL DNA DATA BANK OF CANADA

Forensic Science and
Identification Services,
Royal Canadian Mounted Police
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Ottawa, Ontario K1G 3M8

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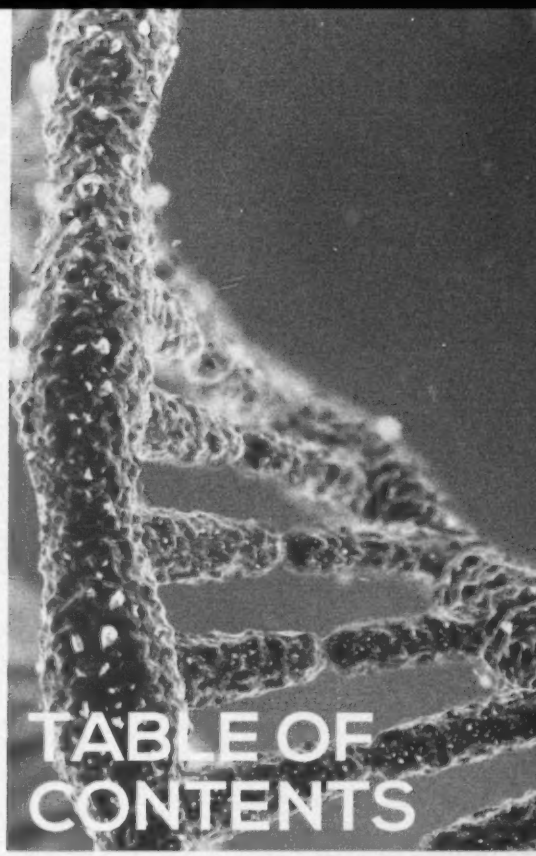
THE NATIONAL DNA DATA BANK



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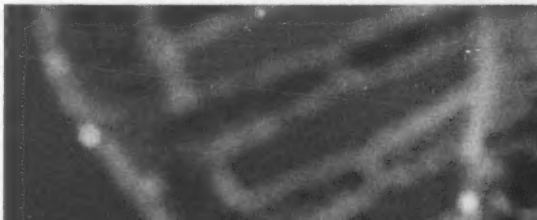


MESSAGE FROM THE COMMISSIONER

Royal Canadian Mounted Police

It is my pleasure to present the 2014/2015 Annual Report of Canada's National DNA Data Bank (NDDB).

This year, the report focuses on the way in which primary criminal offences are often solved using DNA from criminals who have been convicted of lesser, non-violent offences. This happens often enough to highlight the importance of obtaining as many convicted offender DNA profiles as possible. Simply put, the more profiles the NDDB contains, the better it works.

Now in its fifteenth year, the NDDB has become an indispensable tool for police officers and the administration of criminal justice. Time and again, it has proven its effectiveness in solving crimes and exonerating the innocent, while respecting individuals' privacy rights.

Last year ushered in a significant and much anticipated change for the NDDB. In December, Parliament passed an amendment to the DNA Identification Act to expand the national use of DNA analysis to support missing-person cases and further assist criminal investigations. The NDDB will employ proven DNA technologies used by other successful programs around the world to help identify human remains and locate missing persons. Once operational, the Missing Persons DNA Program will include three new indices to help further this new humanitarian objective.

In Canada, approximately 500 missing person and unidentified human remains cases remain unsolved every year. In addition to serving as an important new investigative tool, the Missing Persons DNA Program will offer new hope to families that more can be done to find their missing loved ones.

The RCMP is extremely proud to manage the NDDB on behalf of Canada's law enforcement and justice communities. We look forward to its continued success and progress in the year ahead.

Bob Paulson
Commissioner

THE NATIONAL DNA DATA BANK IN OTTAWA, ONTARIO

QUICK FACTS

413,517
DNA Profiles Contained in the NDDB[1]

307,910
DNA Profiles Contained in the Convicted Offenders Index

105,607
DNA Profiles Contained in the Crime Scene Index

22,050
Convicted Offender Samples Received in 2014/15[2]

11,361
Increase in Crime Scene Index Profiles in 2014/15

4,385
Offender Hits (Convicted Offender to Crime Scene) in 2014/15

411
Forensic Hits (Crime Scene to Crime Scene) in 2014/15

4,796
Investigations Assisted by the NDDB in 2014/15 (Offender and Forensic Hits)

34,495
Offender Hits since June 30, 2000

3,899
Forensic Hits since June 30, 2000

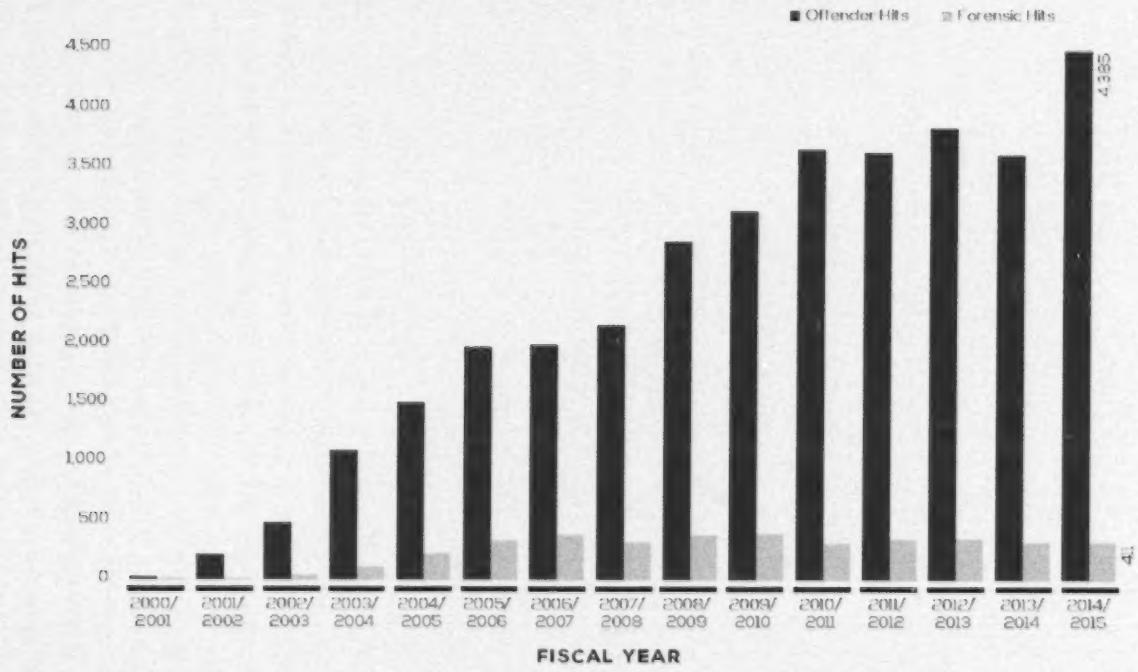
38,394
Investigations Assisted by the NDDB since June 30, 2000 (Offender and Forensic Hits)

1 If no date range is specified the data refers to the period from June 30, 2000 through March 31, 2015

2 2014/15 refers to the NDDB's fiscal year from April 1, 2014 through March 31, 2015

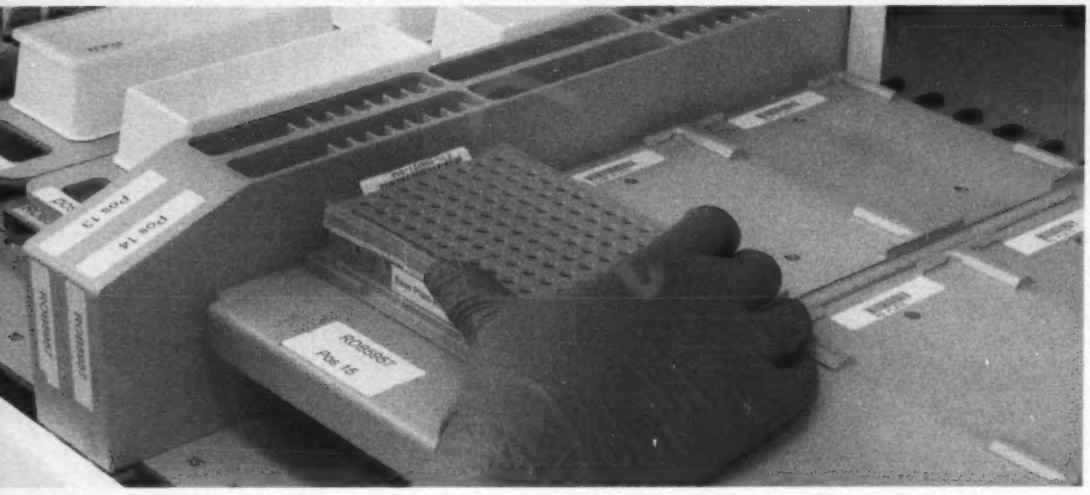
As more DNA profiles are entered into the NDDB, the number of days required for the Offender Hits to increase by a factor of 1,000 has decreased. It took more than three years for the NDDB to reach its first milestone of 1,000 hits. Since 2010/11 that same 1,000 increment milestone has been achieved on average in less than three months.

OFFENDER AND FORENSIC HITS



THE NATIONAL DNA DATA BANK

The RCMP is the steward of the NDDB on behalf of the Government of Canada. It operates the NDDB for the benefit of the entire law enforcement community within Canada.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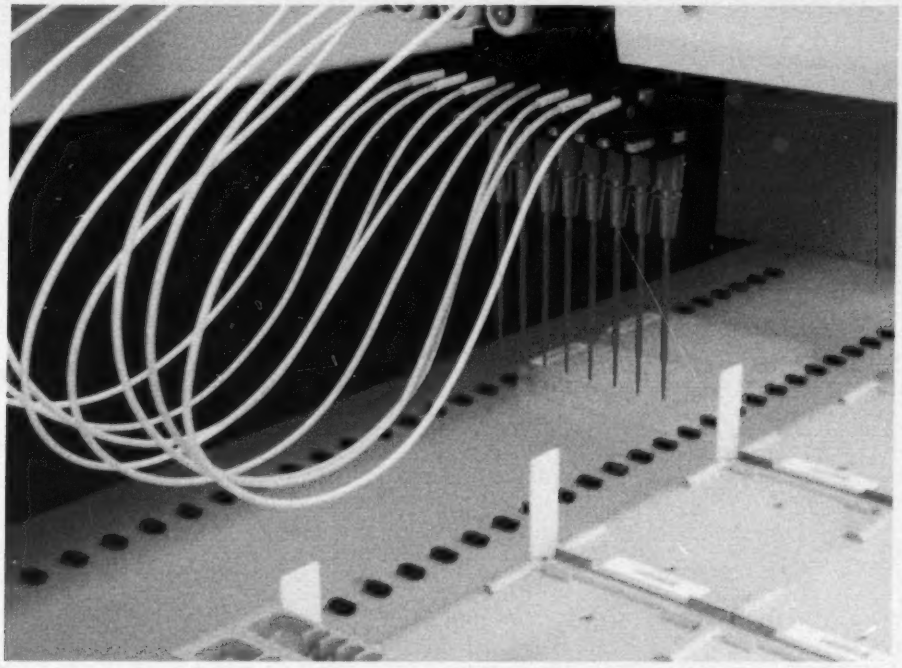


The NDDB improves the administration of justice by contributing to the early identification of those who commit serious crimes:

- Linking crimes where there are no suspects;
- Helping to identify suspects;
- Eliminating suspects where there is no match between crime scene DNA and profiles in the NDDB; and
- Determining whether a serial offender is involved.

The NDDB conducts the following comparisons to assist in criminal investigations:

- DNA profiles developed from crime scene samples are compared against DNA profiles from other crime scenes. Matches identify potential links between different crimes, which helps investigators look for other commonalities that may assist with solving the crimes.
- DNA profiles developed from crime scene samples are compared against convicted offender DNA profiles to associate an offender with a particular crime.

See Appendix A for a detailed chronology of DNA legislation in Canada.

THE WORKING SCIENCE

The NDDB comprises two indices: the Convicted Offenders Index and the Crime Scene Index.

THE CONVICTED OFFENDERS INDEX (COI)

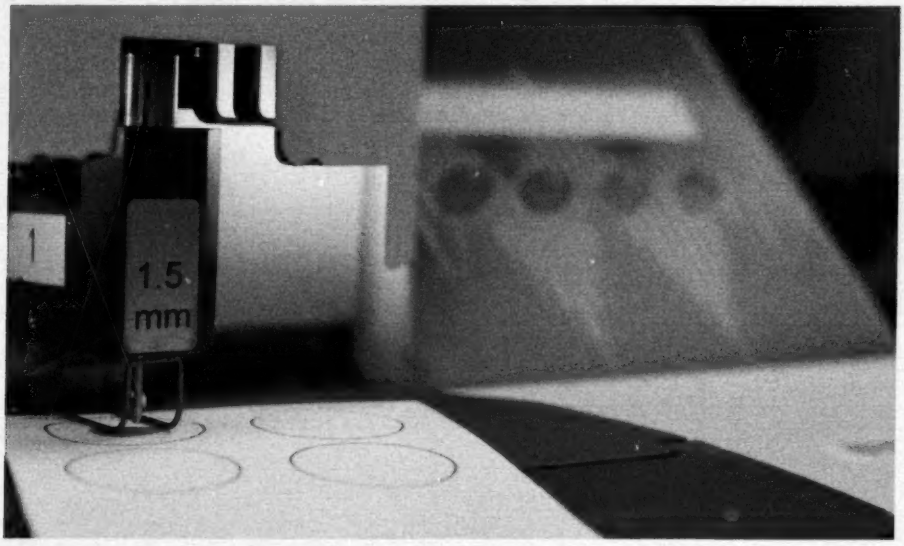
Biological samples collected from convicted offenders are processed by the NDDB and the resulting DNA profiles are entered into the COI.

The COI is the electronic DNA profile database developed from biological samples collected from:

- Offenders convicted of designated primary and secondary offences (see Appendix B) identified in section 487.04 of the *Criminal Code*; and
- Offenders who meet the retroactivity criteria in section 487.055 of the *Criminal Code*. In general terms, this applies to those convicted of certain serious offences who were already serving a sentence or who had been declared a dangerous offender or a dangerous sexual offender before June 30, 2000 when the *DNA Identification Act* was proclaimed. (See Key Statistics explanatory notes on page 25 for a complete description of retroactive provisions).

Biological samples from convicted offenders are collected by:

- A peace officer who is able, by virtue of training or experience, to take samples of bodily substances from the person, by means of the procedures described in subsection 487.06 of the *Criminal Code*; or
- Another person who is able, by virtue of training or experience, to take under the direction of a peace officer, samples of bodily substances from the person, by means of those procedures.



These biological samples are obtained using NDDB-specific sample kits designed for the collection of the following bodily substances:

- **Blood:** The sample is obtained by using a sterile lancet to prick the fingertip.
- **Buccal:** The inside of the mouth is rubbed with a foam applicator to obtain skin cells.
- **Hair:** Six to eight hairs are pulled out with the root sheath attached.

Convicted offender biological samples are collected and submitted to the NDDB to be processed into DNA profiles. Robotics technology, coupled with a sophisticated Sample Tracking and Control System (STaCS™), allows NDDB analysts to rapidly and efficiently process samples while ensuring overall data security and providing quality control throughout the DNA analytical process. Depending on the technology used, the DNA profiles generated are the result of 14 to 18 specific DNA markers that are tested to produce profiles which show a high degree of variability between individuals (with the exception of identical twins).

DNA profiles are loaded into the Combined DNA Index System (CODIS), a software package that stores and compares the profiles. CODIS was developed by the Federal Bureau of Investigation and the U.S. Department of Justice and is provided to the NDDB at no cost. The CODIS software is a universally accepted tool for forensic laboratories, which allows the NDDB to compare DNA profile information using a standard, secure format.

As of March 31, 2015, the COI contained 307,910 DNA profiles.

THE CRIME SCENE INDEX (CSI)

The CSI is a separate electronic database composed of DNA profiles obtained from crime scene investigations of the same designated offences as the COI. Exhibits containing biological evidence are collected by investigators and submitted to a forensic laboratory for examination and development of DNA profiles. The following forensic laboratory systems are authorized to upload profiles using CODIS into the CSI:

- The RCMP Forensic Science and Identification Services (sites in Ottawa, Edmonton and Vancouver);
- The Centre of Forensic Sciences in Toronto and Sault Ste. Marie; and
- The Laboratoire de sciences judiciaires et de médecine légale in Montréal.

The NDDB retains the electronic DNA profile information as well as basic details such as the date, location of the submitting laboratory and a unique number identifier that allows information to be compared by the submitting laboratory in the event of a future match.

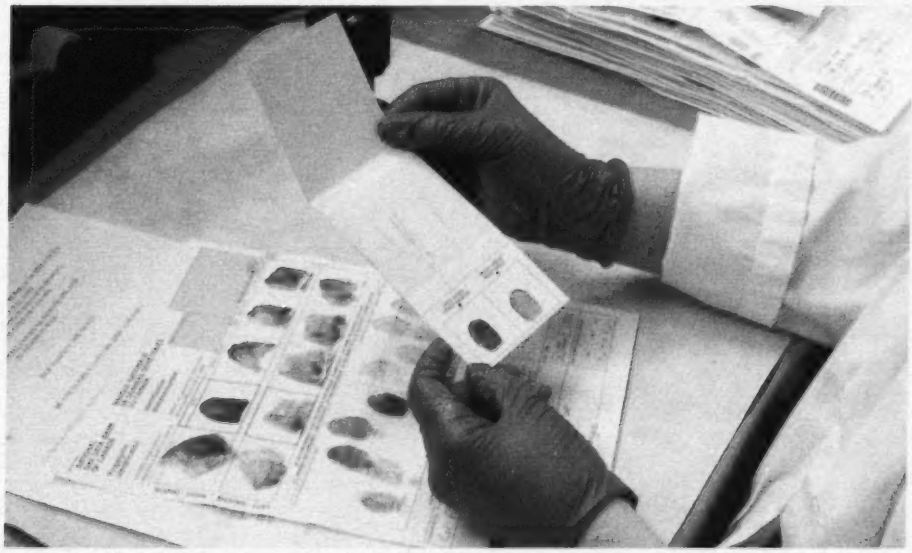
As of March 31, 2015, the Crime Scene Index contained 105,607 DNA profiles.

PRIVACY OF INFORMATION

The NDDB adheres strictly to the *DNA Identification Act*, which balances privacy rights with the need for police officers to identify suspects. Stringent procedures governing the handling of biological samples and resulting DNA profiles ensure that the privacy rights of individuals are protected.

It is important to note that convicted offender samples are identified simply by a bar code number and that crime scene samples are identified by a unique number identifier. In fact, the donor identity of a convicted offender is separated from the genetic information when the sample arrives at the NDDB. The bar code is the only link between personal information, the biological sample and the DNA profile. The personal information is protected information that is not accessible by NDDB staff, and is kept in a separate registry by the RCMP's Canadian Criminal Real Time Identification Services.

The *DNA Identification Act* makes it clear that the NDDB profiles can only be used for law enforcement purposes. The NDDB does not share the DNA profiles with anyone other than law enforcement agencies. The 14 to 18 specific markers comprising the DNA profile are considered anonymous and, other than gender, do not provide specific medical or physical information about the donor. The genetic regions chosen by the NDDB are the same regions of genetic variation used throughout the United States and in many other countries conducting forensic DNA analysis.



INTERNATIONAL PARTICIPATION

The NDDB shares DNA information through an international agreement with INTERPOL, approved by the Government of Canada, which limits its use to the investigation and prosecution of criminal offences. Since April 25, 2002 (date of signed International Agreement), the NDDB has received 1,304 incoming international requests to search its indices— the Convicted Offenders Index and the Crime Scene Index—resulting in 2 Offender Hits and 5 Forensic Hits. The NDDB has sent out 217 international search requests for DNA profiles developed from crime scene samples, resulting in 2 Offender Hits and 1 Forensic Hit.

THE MISSING PERSONS DNA PROGRAM

In December 2014, the *DNA Identification Act* was amended to expand the national use of DNA analysis so it could be used in missing persons' investigations. Five new indices within the NDDB will eventually be created: three that will support humanitarian efforts and two that will strengthen existing operations.

In accordance with Canadian law, this new legislation will allow DNA profiles to be collected from missing persons, relatives of missing persons and unidentified remains. The privacy of personal information continues to be of the utmost importance. Legislation governing the Missing Persons DNA Program will protect Canadians' privacy rights by using a number of safeguards to ensure that DNA profiles contained in the NDDB are used only for their intended purpose.

The Missing Persons DNA Program is currently in development and is expected to be operational by the spring of 2017.

PROCESS FOR REPORTING A MATCH

NDDB processes biological samples from convicted offenders and uploads the resulting DNA profiles into the Convicted Offenders Index.

Forensic laboratories process biological samples left at crime scenes and upload the resulting DNA profiles into the Crime Scene Index of the NDDB.

NDDB runs a search between the Crime Scene Index and the Convicted Offenders Index.

Match between a convicted offender's DNA profile and a crime scene DNA profile.

Bar code, laboratory identifier and CODIS identifier are brought to Canadian Police Services Information Centre (CPSIC).

CPSIC forwards the convicted offender data to the forensic laboratory.

Forensic laboratory passes the convicted offender identity information to the investigator.

PROCESS FOR CONFIRMING A MATCH

The investigator assesses the case evidence to determine if further investigation of the suspect is required.

If evidence of a match between the convicted offender and the crime scene profile is required for court purposes, the investigator must apply to a provincial court judge for a DNA warrant. If the warrant is ordered, a biological sample can be collected from the suspect under that authority.

The biological sample is submitted to a forensic laboratory for analysis. The laboratory compares the suspect's DNA profile to that of the crime scene evidence.

The forensic laboratory issues a report confirming a match between the suspect's DNA profile and that of the crime scene evidence.

Based on the laboratory report and other investigative information, the investigator can consider if charges should be laid or recommended against the suspect.

MORE SAMPLES, MORE MATCHES, MORE CRIMES SOLVED

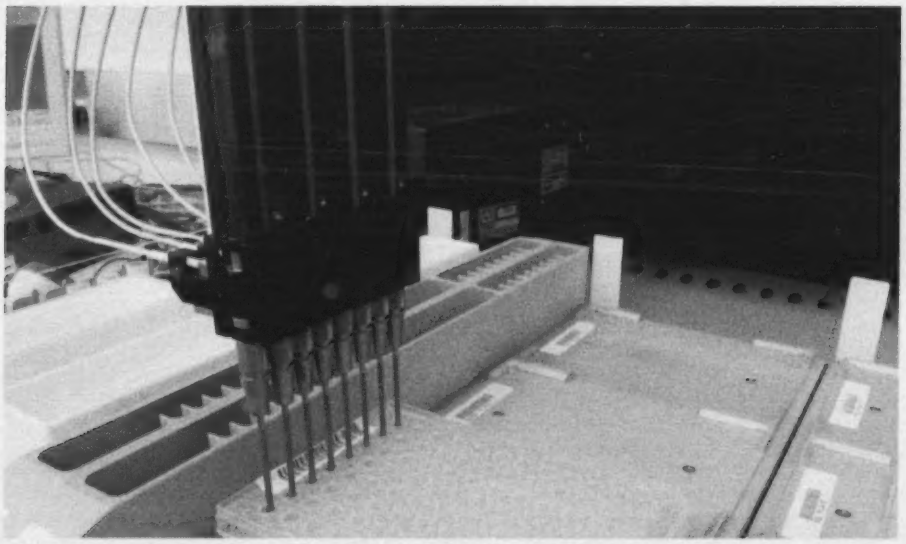
Despite what popular police dramas would have us believe, DNA on its own can't solve crimes. Investigators still have to do the same meticulous legwork they've always done, but now they can use DNA evidence to narrow the focus on certain suspects while eliminating others. In other words, DNA is helping investigators do their jobs more efficiently, which ultimately means it's helping them protect Canadians.

The NDDB continues to demonstrate its effectiveness in assisting criminal investigations. The more profiles the COI contains, the more likely it is that matches will be made and more investigations will benefit from DNA evidence. Every time a DNA order is not requested, or if a requested order is denied, an opportunity to solve a crime is potentially missed.

When the NDDB opened its doors in June 2000, a DNA sample could only be taken from someone convicted of committing a serious crime against a person such as murder, sexual assault or aggravated assault. A limited number of secondary offences such as break and enter also qualified. Since then, the list of criminal offences for which a DNA sample can be obtained has been significantly updated and expanded. (Appendix A describes the changes in legislation since 2000)

For the purpose of entering DNA profiles in the NDDB, crimes are typically categorized as either primary or secondary offences. (Appendix B provides a detailed description of the different categories of designated offences)

Primary designated offences include violent crimes committed against people. In addition to violent crimes, breaking and entering into a dwelling place, as opposed to a commercial establishment, became a primary designated offence in 2008. The law considers these to be the most serious crimes, so upon conviction, DNA orders are usually mandatory. The court can only refuse to issue a DNA order under very limited circumstances.



Secondary designated offences are considered less serious crimes. Upon application by a Crown Counsel, a DNA order can be issued for an individual who has been convicted of a secondary designated offence. They are considered important enough that Canada's *Criminal Code* has been changing to expand the number of offences for which DNA orders can be obtained. Since 2008, this expansion has dramatically increased the number of DNA profiles in the NDDB and has consequently benefitted investigators across the county. The complete list consists of more than 200 offences. Cold cases that are decades old have been solved as a result.

As an example, drug offences and driving offences are now included as secondary designated offences. Someone found guilty on indictment of a driving or a drug charge can be ordered to provide a DNA sample that will be uploaded to the NDDB's Convicted Offenders Index (COI). Since 2008, DNA samples collected for convictions on drug offences have assisted 123 sexual assault investigations and 117 murder investigations while DNA samples collected from individuals convicted of driving offences have assisted 30 sexual assault and 16 murder investigations. These are examples of the way in which DNA from non-violent crimes is being used to solve violent crimes.

Break and enters are high-volume offences. On first pass through the NDDB, a significant percentage of DNA profiles generated from break and enter crime scenes are found to match DNA that's already in the NDDB, either in the COI or the Crime Scene Index (CSI). Establishing a concrete connection between a new crime and a convicted offender helps the police solve many outstanding investigations more rapidly than they could without DNA evidence. The end result is that offenders are taken off the streets quickly, preventing them from doing further harm.

One case that clearly demonstrates the way in which DNA from a non-violent crime can help solve a violent crime was the murder of Denise Morelle. In July 1984, the popular children's television entertainer was found mutilated and strangled to death in a vacant apartment in Montreal, Quebec. Her death shocked the community. The search for suspects eventually went cold but investigators didn't forget about Morelle. After the NDDB was established, unidentified DNA found on her body was uploaded to the NDDB's CSI.

In 2006, a 49-year-old career criminal named Gaétan Bissonnette was convicted of a break and enter. The Crown Counsel who prosecuted his case applied to obtain a DNA sample from him and the presiding judge approved the application. As a result, Bissonnette's DNA was uploaded to the NDDB's Convicted Offenders Index. Soon after, police were told that Bissonnette's DNA matched the DNA found on Morelle's body at the time of her murder. Confronted with the certainty of the DNA evidence against him, Bissonnette pled guilty to second-degree murder and was sentenced to life in prison. In this case, thanks to a Crown Counsel and a judge who both believed in the importance of obtaining DNA for a secondary designated offence (at that time), a break and enter conviction helped solve a 23-year-old murder.

The NDDB is governed by the *DNA Identification Act*, which recognizes that there have to be safeguards on the communication of DNA profiles to protect the privacy of individuals. Privacy is protected through stringent procedures that dictate the handling of biological samples and the DNA profiles generated from those samples. Information collected by the NDDB is used strictly for law enforcement purposes. In the judgment of the Supreme Court, the legislation and the procedures have adequately addressed concerns about the potential impact that DNA sampling could have on individuals' privacy rights.

Obtaining a DNA sample from a convicted offender is as straightforward as taking a mouth swab or a few drops of blood from the fingertip using a method similar to the one diabetics use to test their blood each day. It does the individual no harm and thanks to the help that DNA provides to criminal investigators, it contributes to the safety of Canadians.

The more DNA samples the National DNA Data Bank (NDDB) contains, the greater the chance that a match will be made between a biological sample left at the scene of a crime and a known criminal whose DNA has already been uploaded to the Data Bank. For this reason, Crown Counsels who request that DNA samples be collected for secondary designated offences (or what are often considered lesser offences in the eyes of the court), judges who approve the requests and police officers who enforce the DNA orders are all helping to strengthen the NDDB as an investigative tool for solving crimes.

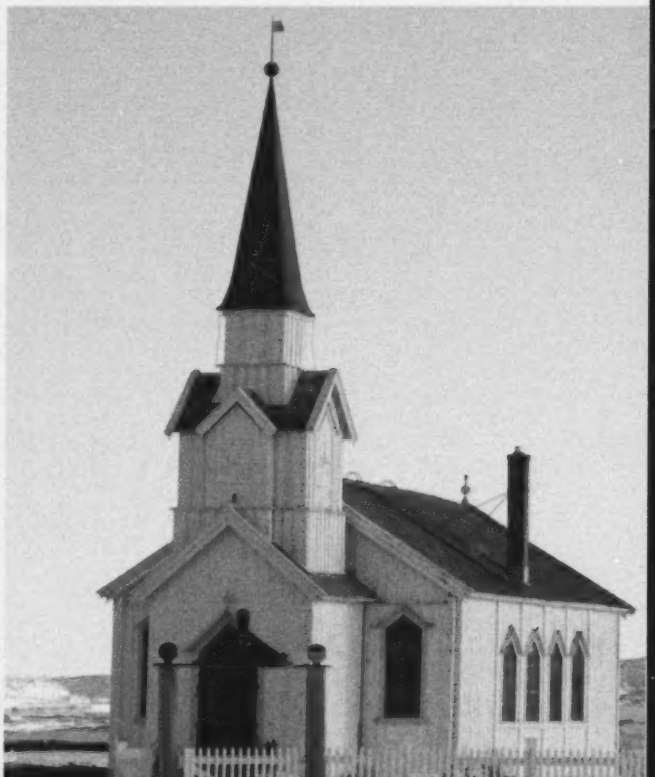
SUCCESS STORIES

By March 31, 2015, the NDDB had registered its 34,495th Offender Hit, the term used to indicate a match between crime scene DNA and the DNA profile of a convicted offender registered in the Data Bank. The following success stories are a few examples that demonstrate the importance of requesting, approving and enforcing DNA orders for lesser offences.

MINOR OFFENCE IN CRIMINAL'S PAST LEADS TO ARREST FOR SEXUAL ASSAULT

In 2012, in Pond Inlet, Nunavut, a 52-year-old woman was sexually assaulted by a young man behind a church. The woman was taken to a medical centre where a sexual assault examination was performed. The forensic laboratory developed a DNA profile which was uploaded to the NDDB's Crime Scene Index. The profile immediately produced a match with a known offender.

Two years earlier, the same man's DNA had been uploaded to the Convicted Offenders Index after he had been convicted of a minor, non-violent criminal charge: "Failure to Comply" with the terms of his release from police custody. He had been in custody as a result of a break and enter charge. While "Failure to Comply" with the terms of release is a non-violent offence for which a DNA order can be issued, judges and Crown Counsels don't often take advantage of this opportunity. In this case, the offender's DNA was obtained and it eventually provided the key piece of evidence that allowed the 2012 sexual assault case to be solved quickly.



CAREER CRIMINAL FINALLY JAILED FOR COLD CASE KILLING

In 1987, in Edmonton, Alberta, an 83-year-old widow was beaten severely by a young man who broke into her home. Fighting for her life during the attack, she managed to pull a clump of hair from his scalp. He fled after ransacking her house, taking cash and jewellery with him, leaving the injured woman alone on her kitchen floor. The next morning, she was found by a neighbour but died of her injuries in hospital six days later. Police managed to develop only a few investigative leads and her stolen jewellery was never found. The case went cold.

Despite the passage of time, detectives continued to work on the file. Soon after the NDDB was established in 2000, a DNA profile developed from the killer's hair was uploaded to the Crime Scene Index. In 2008, a match between profiles in the Crime Scene Index and Convicted Offenders Index finally solved the case. The murderer was easy to find -- he was already serving time in a British Columbia jail. After being convicted of a break and enter charge in 2008, the court ordered that his DNA be uploaded to the NDDB's Convicted Offenders Index. A career criminal, he had been convicted many times but was not ordered to provide a DNA sample until 2008 when break and enter in a dwelling house became a primary offence. When someone is convicted of a primary offence, the courts have little discretion and a DNA sample is usually mandatory. Thanks to the DNA developed from the hair pulled from his head in 1987, he was finally charged with and convicted of the Edmonton manslaughter and sentenced to 13 years in prison.

DNA FROM ARSON CONVICTION HELPS SOLVE MURDER

In August 2004, two masked men armed with clubs, a gun and pepper spray attacked and killed a 52-year-old man near his home in rural Quebec. After shooting the victim, the men fled the scene in his vehicle. Investigators later found a ligature at the crime scene that had been used to restrain the victim. They developed an unidentified DNA profile from it and uploaded it to the NDDB's Crime Scene Index. It matched the DNA of a known offender whose DNA had been uploaded to the NDDB's Convicted Offenders Index following his conviction on arson charges two years earlier. The suspect was subsequently charged with second degree murder.

SEXUAL ASSAULT AT CARIBANA FESTIVAL SOLVED AFTER TWO DECADES

In 1990, in Toronto, Ontario, a young woman was sexually assaulted near Nathan Phillips Square. She was a member of a group of young people in the custody of the Children's Aid Society that had come from Timmins to enjoy the Caribana festivities. While she was dancing, she was approached by a man who led her away from the crowd to a secluded spot, threatened her with a knife then sexually assaulted her. After he fled the scene, she returned to her group, told them what had happened and was taken to a hospital.

At the time of this assault, the National DNA Data Bank didn't exist. The investigation produced no leads and became an unsolved cold case. In 2012, investigators reassessed the young woman's case. An article of her clothing was used to develop a DNA profile of the suspect and that profile was uploaded to the NDDB's Crime Scene Index. In 2010, a man who had been convicted of two secondary offences, failure to comply with the terms of release from custody and criminal harassment, was ordered by the courts to submit a DNA sample to the NDDB's Convicted Offenders Index. His DNA matched the profile from the 1990 Caribana investigation. The man was tried and convicted of sexual assault.

DNA HELPS SOLVE CHILD ABDUCTION AND SEXUAL ASSAULT CASE

On a summer night in 1995 in Edmonton, Alberta, a 19-year-old man broke into a house and abducted a sleeping seven-year-old girl. He took her to a dark alley, sexually assaulted her, then fled the scene, leaving the child naked and alone. Once she knew he had gone, she ran for help and was taken to the police. Inspecting the crime scene, investigators found the little girl's pyjama bottoms and her blanket. Police searched for months but could not find her assailant and the case eventually went cold. Eight years later, they reopened the case and reanalyzed the evidence. A DNA profile was developed from semen stains found on the girl's pyjama bottoms and blanket. It matched the DNA of a man who had been entered into the NDDB's Convicted Offender Index in 2000 after being convicted of an assault. More than a decade after he sexually assaulted the little girl, he was tried and found guilty of kidnapping, unlawful confinement and aggravated sexual assault and was sentenced to 13 years in prison.

THE NATIONAL DNA DATA BANK ADVISORY COMMITTEE

Message from the Chairperson

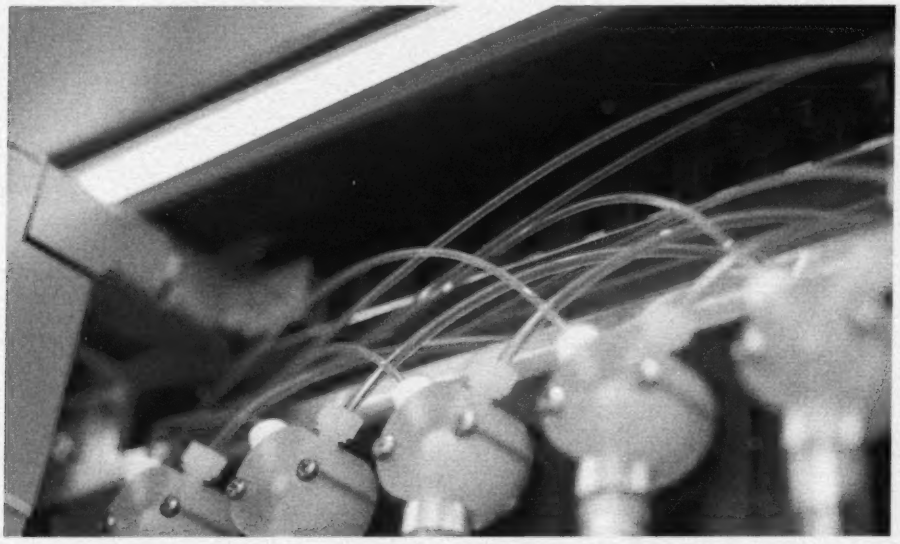
The National DNA Data Bank (NDDB) Advisory Committee was established in 2000 under the authority of the *DNA Identification Act*. Drawing on its members' diverse expertise in privacy, science, medical ethics, policing and the law, the Committee provides the NDDB with indispensable strategic guidance.

Several times each year, the Committee reports to the Commissioner of the RCMP on matters related to the NDDB's effective and efficient operation. All members of the Advisory Committee are appointed by the Minister of Public Safety and Emergency Preparedness.

Since its inception, front-line investigators have come to rely on the NDDB as an essential crime-solving tool. The Advisory Committee's range of knowledge and ability to keep pace with emerging technology has enabled its members to identify opportunities to enhance the Data Bank's effectiveness, thereby improving the service it provides to investigators.

This year, the NDDB Annual Report highlights the importance of obtaining DNA samples from offenders convicted of secondary, non-violent offences. In a significant percentage of cases, this key evidence helps investigators solve serious violent crimes such as sexual assault and murder. While it used to take more than three years to achieve 1,000 hits between DNA profiles in the NDDB's Convicted Offenders Index and the Crime Scene Index, it now takes on average 90 days. This dramatic reduction in the time it takes to make a hit is helping investigators solve crimes more quickly than ever before.

In December 2014, a significant development occurred: the *DNA Identification Act* was amended to expand the national use of DNA analysis, which will allow it to be used in support of missing persons' investigations. Once this amendment



comes into force, it will enable the creation of five new indices within the NDDB: three for humanitarian purposes and two that will strengthen existing operations. The missing persons DNA project is still very much in the development phase and is not expected to be operational until the spring of 2017. Once it is, it will apply the same proven DNA technologies that are employed by other countries' missing persons DNA programs. By adopting existing best practices, we expect Canada's missing persons DNA project will gain a critical new tool that can be applied to these particularly challenging cases.

The past 15 years of NDDB accomplishments would not have been possible without the dedication of forensic scientists and the full support of diligent police investigators and our partners in the criminal justice system. I would like to close by acknowledging the dedication of the members of NDDB Advisory Committee. Their ongoing interaction with the NDDB's stakeholders has been an indispensable component of the Data Bank's achievements.

Garry Loeppky, O.O.M.
Deputy Commissioner (retired),
Chairperson
National DNA Data Bank
Advisory Committee

THE NATIONAL DNA DATA BANK

ADVISORY COMMITTEE MEMBERS

GARRY LOEPPKY

O.O.M. Garry Loeppky, D/Commr. (Rtd), served with the Royal Canadian Mounted police for 34 years. Throughout his career, D/Commr. Loeppky (Rtd) was responsible for coordinating and leading major investigations on both a domestic and international level. He worked with numerous foreign law enforcement organizations and has lectured in a number of countries including Canada, Australia, United States, and Europe.

PATRICIA KOSSEIM

Patricia Kosseim is Senior General Counsel at the Office of the Privacy Commissioner of Canada, where she provides strategic legal and policy advice, represents the Privacy Commissioner before courts and Parliamentary Committees, and oversees research on emerging privacy issues. Previously, Ms. Kosseim worked at Genome Canada and the Canadian Institutes of Health Research, where she led national strategies for addressing ethical, legal and social implications of science and technology. She presents, publishes and teaches on matters of health law, privacy and ethics.

DR. FREDERICK R. BIEBER

Canadian-born Associate Professor of Pathology in the Faculty of Medicine at Harvard University, Boston, Massachusetts. Dr. Bieber is a medical geneticist and a specialist in bio-medical ethics.

GISÈLE CÔTÉ-HARPER

O.C., Q.C., graduate of Harvard Law School and currently a Barrister and Emeritus Professor at the Faculty of Law, Université Laval. Mme Côté-Harper is recognized nationally and internationally as a legal expert on human rights issues.

WILLIAM S. DAVIDSON, PH. D.

Medical Genetics Specialist and Professor of Molecular Biology and Biochemistry, Simon Fraser University (Burnaby, B.C.). Dr. Davidson has published widely in the areas of molecular evolution, population genetics, genomics and human genetics.

DR. RON FOURNEY

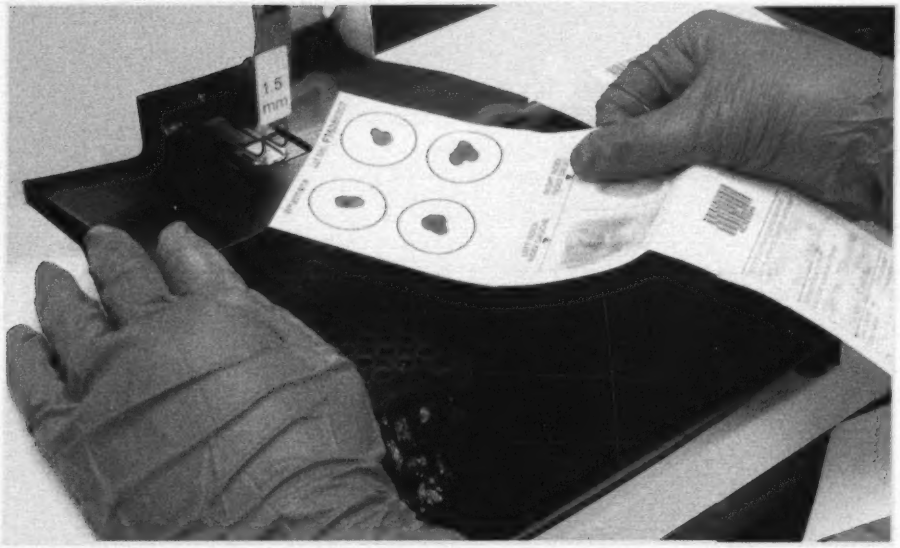
O.O.M., Director, Science and Strategic Partnerships, Forensic Science and Identification Services, RCMP. Dr. Fourney is a research scientist and founding member of the RCMP DNA program. He has been instrumental in the development and implementation of forensic DNA typing for Canada.

DR. ANJALI MAZUMDER

Dr. Mazumder holds a Doctorate in Statistics from the University of Oxford and is a Research Fellow in the Department of Statistics at the University of Warwick. Dr. Mazumder has published widely in the fields of forensic DNA identification and value of evidence analysis using probabilistic expert systems and best practices in forensic science.

DERRILL PREVETT

J.D. (University of British Columbia), with 37 years of legal experience. Many of his criminal cases involved forensic evidence, particularly forensic DNA analysis. From 2002 until 2007, Mr. Prevett was a key member of the prosecution team for the trial of Robert William Pickton. He is internationally recognized as a legal expert on DNA evidence. He has lectured at various professional venues in Canada and abroad including the Justice Institute of B.C., Vancouver Island University, The University of Victoria, Osgoode Hall, the Canadian Society of Forensic Science and the International Association of Forensic Sciences.



KEY STATISTICS

JUNE 30, 2000 THROUGH MARCH 31, 2015

TABLE 1 - CASES ASSISTED BY THE NDDB

Breaking and Enter	12,153
Sexual Offence	4,157
Robbery	3,838
Assault	2,664
Homicide	2,368
Attempted Murder	741
Other	8,574
TOTAL	**34,495**

TABLE 2 - MATCH INVENTORY REPORT

Offender Hit (Crime Scene Index to Convicted Offenders Index)	34,495
Forensic Hit (Crime Scene Index to Crime Scene Index)	3,899
Offender Duplicate (Two samples taken from the same person)	13,264
Identical DNA Profiles (from different individuals i.e. identical twins)	265

EXPLANATORY NOTES

Offender "Hit": A DNA profile developed from crime scene evidence and entered in the Crime Scene Index of the NDDB matches a DNA profile in the Convicted Offenders Index.

Forensic "Hit": A DNA profile developed from crime scene evidence and entered in the Crime Scene Index of the NDDB matches another crime scene DNA profile in the Crime Scene Index.

Offender Duplicate: Cases where two biological samples from the same person were submitted to the NDDB.

Identical DNA Profiles: Profiles of identical twins.

Convicted Offender's Profile: A DNA profile from an offender convicted of a designated offence (see Appendix B).

Crime Scene Profile: A DNA profile developed from biological evidence found at a crime scene.

Samples Received versus Profiles Contained in the Convicted Offenders Index: As of March 31, 2015, the NDDB had received 338,379 biological samples, of which 307,910 DNA profiles were contained in the Convicted Offenders Index. The difference of 9.0 % can be attributed to rejected samples, duplicate samples, biological samples in the process of being treated and profiles removed from the Convicted Offenders Index because of a discharge, the retention period had expired, or the conviction or the order/authorization was quashed on appeal.

TABLE 3 – DNA PROFILES CONTAINED IN THE NDDB

Convicted Offenders Index	307,910
Crime Scene Index	105,607
TOTAL	**413,517**

Note: The NDDB receives 400-500 convicted offender samples per week.

TABLE 4 – BREAKDOWN OF PROFILES CONTAINED IN THE CRIME SCENE INDEX

Centre of Forensic Sciences (Toronto and Sault Ste. Marie)	37,905
Laboratoire de sciences judiciaires et de médecine légale (Montréal)	33,989
RCMP Forensic Science and Identification Services (Ottawa, Edmonton, Vancouver)	33,713
TOTAL	**105,607**

TABLE 5 – BREAKDOWN OF CONVICTED OFFENDER SAMPLES RECEIVED ACCORDING TO CATEGORY AND OFFENCE TYPE

DNA Data Bank Orders	333,368
Retroactive Authorizations	5,011
TOTAL	338,379
Primary	179,635
Secondary	155,803
Other	2,941
TOTAL	338,379

Note: The "Other" category includes samples submitted following conviction for a non-designated offence or without a court order. These samples are not processed unless the NDDB receives a corrected order.

EXPLANATORY NOTES

Convicted Offenders Index: A post-conviction database composed of two categories of samples:

1. DNA Data Bank Orders: Includes DNA samples collected from offenders who are convicted of an offence committed at any time, including before June 30, 2000, if the offence is a designated offence when the person is sentenced or discharged.

2. Retroactive Authorizations: A biological sample taken from an offender who was found guilty of a designated *Criminal Code* offence before June 30, 2000 and who had been:

a. Declared a dangerous offender under Part XXIV of the *Criminal Code*;

b. Declared a dangerous offender or a dangerous sexual offender under Part XXI of the *Criminal Code*;

c. Convicted of murder;

c.1. Convicted of attempted murder or conspiracy to commit murder or to cause another person to be murdered and is currently serving a sentence of imprisonment for that offence;

d. Convicted of a sexual offence within the meaning of subsection 487.055(3) of the *Criminal Code* and is currently serving a sentence of imprisonment for that offence; or

e. Convicted of manslaughter and is currently serving a sentence of imprisonment for that offence.

As of March 31, 2015, approximately 6,244 offenders qualified for inclusion in the retroactive category as defined by Bills C-3 and C-13/C-18. From this list of qualified offenders, 6,155 files were concluded with the remainder being prepared by the Attorneys General for court applications.

Primary and Secondary Offences: **See Appendix B.**

TABLE 6 – CONVICTED OFFENDER SAMPLES RECEIVED BY PROVINCE/TERRITORY

British Columbia	40,065
Alberta	36,108
Saskatchewan	14,362
Manitoba	20,539
Ontario	148,434
Quebec	55,636
New Brunswick	4,247
Nova Scotia	8,999
Prince Edward Island	858
Newfoundland & Labrador	4,878
Yukon	536
Northwest Territories	1,944
Nunavut	1,773
TOTAL	**338,379**

Note: The above information represents the convicted offender samples received and is not reflective of the number of convictions eligible for inclusion into the Convicted Offenders Index.

TABLE 7 – TYPE OF SAMPLES RECEIVED FROM CONVICTED OFFENDERS

Blood	334,037
Buccal	4,037
Hair	305
TOTAL	**338,379**

TABLE 8 – BREAKDOWN OF CONVICTED OFFENDER SAMPLES RECEIVED

Adult Offender	297,035
Young Offender	41,269
Military Offender	75
TOTAL	**338,379**

TABLE 9 – CONVICTED OFFENDER SAMPLES RECEIVED - BREAKDOWN BY OFFENCES

Assault	206,875
Sexual Offence	64,208
Break and Enter	48,728
Robbery	41,558
Controlled Drugs and Substances Act	28,902
Homicide	8,515
Other	37,786
TOTAL	**436,572**

NOTE: More than one offence may be associated with a sample

SAMPLE REJECTIONS

The NDDB has rejected only 4,901 (1.4 %) of the samples it has received to date. Reasons for rejection include: offender convicted of a non-designated offence, inadequate biological samples, use of inappropriate collection kit, missing/ invalid order and others. More than 54.6 % of the samples rejected were collected from offenders convicted of non-designated offences and are therefore not eligible for inclusion in the Convicted Offenders Index. More than 27.0 % of the samples rejected were collected from offenders using an inappropriate collection kit.

COLLECTION OF ADDITIONAL BODILY SUBSTANCES

In some instances, bodily substances have to be taken a second time, pursuant to a re-sampling authorization issued under subsection 487.091(1) of the *Criminal Code* which provides for an application for re-sampling when the original sample submitted is rejected. If the quality of the biological sample submitted is deemed inadequate for DNA analysis or if it had not been transmitted in accordance with the *DNA Identification Regulations*, the sample is rejected. Since June 30, 2000, the NDDB has received 897 samples that were taken under this provision.

EXPLANATORY NOTES

Assault: includes assault with a weapon or causing bodily harm, aggravated assault, assaulting a peace officer, overcoming resistance to commission of offence, criminal harassment and uttering threats.

Break and Enter: includes break and enter with intent, being unlawfully in a dwelling-house, break and entering a place other than dwelling-house and possession of break-in instruments.

Robbery: includes robbery and extortion.

Sexual Offence: includes rape, sexual intercourse with a female under 14 and between 14 and 16, sexual intercourse with the feeble-minded, sexual interference, invitation to sexual touching, sexual exploitation, incest, bestiality, child pornography, indecent acts, offence in relation to juvenile prostitution, sexual assault with a weapon, aggravated sexual assault, sexual assault, indecent assault, gross indecency, prostitution and luring a child.

Homicide: includes manslaughter.

***Controlled Drugs and Substances Act*:** includes possession for the purpose of trafficking, import or export of a controlled substance, trafficking and production of substances. In 2008, Canadian legislation changed to allow DNA samples to be collected from offenders sentenced for a range of less serious criminal offences, including convictions under the *Controlled Drugs and Substances Act* (CDSA). Since January 1, 2008, the enabling changes in legislation for CDSA offences alone allowed for the collection of 28,902 DNA samples. So far, these samples have resulted in 1,056 convicted offender hits that have assisted in the investigation of 117 murders and 123 sexual assaults.

The Other category includes: using explosives, causing death by criminal negligence, causing bodily harm by criminal negligence, causing bodily harm with intent, dangerous operation causing death, failure to stop at the scene of an accident, impaired driving causing death, unlawfully causing bodily harm, kidnapping, hostage taking, mischief causing danger to life, arson (disregard to human life), setting fire to other substance, arson (own property), firearms, fraud, counterfeiting, criminal organization, escape, flight, theft over $5,000, forgery, disguise and intimidation.

TABLE 10 – BREAKDOWN OF BIOLOGICAL SAMPLES DESTROYED AND DNA PROFILES REMOVED FROM THE CONVICTED OFFENDERS INDEX

	ADULT	YOUNG PERSON
Conditional discharge	6,924	895
Conviction quashed on appeal	546	26
Absolute discharge	345	61
Duplicate sample (same order)	316	24
No suitable DNA profile obtained	93	16
Order/authorization quashed	30	8
Retention period expired	N/A	2,584
Other	49	9
TOTAL	**8,303**	**3,623**

N/A Not applicable

TABLE 11 – ENDORSEMENTS RECEIVED BY PROVINCE/TERRITORY

British Columbia	11,268
Alberta	8,928
Saskatchewan	1,612
Manitoba	4,605
Ontario	50,316
Quebec	8,804
New Brunswick	158
Nova Scotia	1,395
Prince Edward Island	38
Newfoundland & Labrador	582
Yukon	103
Northwest Territories	362
Nunavut	295
TOTAL	**88,466**

Note: The data associated with Endorsements is from January 1, 2008 through March 31, 2015

TABLE 12 – BREAKDOWN OF ENDORSEMENTS RECEIVED

Adult Offender	84,617
Young Offender	3,846
Military	3
TOTAL	**88,466**

ENDORSEMENT

Section 487.071 of the *Criminal Code* requires police officers to verify with the Canadian Police Information Centre whether a convicted offender's DNA profile is already in the NDDB prior to executing every new DNA data bank order or authorization. If the DNA profile of an offender is contained in the Convicted Offenders Index of the NDDB, police officers may not take the bodily substances from the offender but are required to submit the unexecuted DNA data bank order or authorization with an endorsement form confirming they have been advised that the person's DNA profile is already contained in the NDDB, along with the offender's fingerprints to the NDDB. The purpose of the endorsement process is to ensure that an offender's DNA profile remains in the NDDB if:

- The conviction for which the original DNA order was made is quashed on appeal; or
- The original Order/Authorization is quashed on appeal; or
- The retention period has expired because the person was either:
  - Convicted as a young person; or
  - Discharged under Section 730 C.C. of a designated offence.

TABLE 13 – ENDORSEMENTS RECEIVED BREAKDOWN BY OFFENCES

Assault	57,516
Break and Enter	17,939
Robbery	11,272
Controlled Drugs and Substances Act	8,282
Sexual Offence	5,372
Homicide	912
Other	18,038
TOTAL	**119,331**

Note: More than one offence may be associated with a sample

ENDORSEMENT REJECTIONS

The NDDB has rejected only 1,513 (1.7 %) of the endorsements it has received to date. Reasons for rejection include: DNA profile from the offender is not contained in the Convicted Offenders Index, offender convicted of a non-designated offence and others. More than 50.3 % of the endorsements rejected were collected from offenders convicted of non-designated offences.

FINANCIAL STATEMENT

APRIL 1, 2014 – MARCH 31, 2015

EXPENDITURE TYPE	EXPENDITURE ($ THOUSANDS)
Personnel	1,930
Internal Services	328
Employee Benefit Plan	452
Transport and Telecommunications	8
Development and Infrastructure Support	52
Rentals	3
Repair and Maintenance	14
Utilities, Materials and Supplies	755
Capital and Minor Equipment Purchases	170
Miscellaneous	8
SUB-TOTAL	3,720
Indirect Costs[1]	277
TOTAL	3,997

[1] Indirect Costs include: Forensic Science and Identification Services administrative and corporate support, Research and Development, recruitment, the Quality Assurance Program, IT Support and the National DNA Data Bank Advisory Committee.

APPENDIX : A

CHRONOLOGY OF DNA LEGISLATION IN CANADA

1995	JULY	Bill C-104 receives Royal Assent. The bill amends the *Criminal Code* and the *Young Offenders Act* to enable judges to issue a warrant allowing police to obtain DNA evidence from suspects in criminal investigations. This is Phase I of the Government of Canada's DNA Strategy which provided the legislative framework for the use of DNA evidence in criminal proceedings.
1996	JANUARY	Phase II of the Government of Canada's DNA Strategy begins with nation-wide consultations for the establishment of a national DNA data bank.
1998	DECEMBER	Bill C-3 (Statutes of Canada 1998, c. 37) receives Royal Assent. Work begins with an 18-month schedule to establish the NDDB.
1999	NOVEMBER	Bill S-10 is tabled in the Senate. Based on Senate recommendations, the Bill contains amendments to Bill C-3 including: the taking of fingerprints for identification purposes, the inclusion of offenders convicted of designated offences in the military justice system, and a full legislative review of the DNA legislation and NDDB to be conducted by the Senate and House of Commons after five years.
2000	MAY	Partial proclamation of Bill C-3 which established the DNA Data Bank Advisory Committee by Regulations.
2000	JUNE	Full proclamation of Bills C-3 and S-10. DNA sample collections are to commence immediately following proclamation.

2005	MAY	Royal Assent of Bill C-13 (Statutes of Canada, 2005, c. 25). Amendments to expand the retroactive scheme, to clarify the NDDB DNA profile sharing procedures with forensic laboratories, and to establish procedures to confirm the validity of NDDB orders coming into force on Royal Assent. Other provisions of the Bill will come into force on proclamation.
2007	JUNE	Royal Assent of Bill C-18 (Statutes of Canada 2007, c. 22). Amendments to facilitate the implementation of Bill C-13, and: • further expand the retroactive scheme to include attempted murder and conspiracy, and replace the "is serving a sentence of two years or more" requirement with "is on the date of the application serving a sentence of imprisonment" for that offence; • allow for NDDB orders to be made within 90 days after the person is sentenced or found not criminally responsible on account of mental disorder; • allow a person to be summoned for the execution of a NDDB order and penalties for failure to appear; • clarify international NDDB DNA profile sharing procedures; and, • clarify destruction procedures for defective orders.
2008	JANUARY	Full proclamation of Bills C-13 and C-18.
2009	JUNE	Parliamentary Statutory Review of the DNA legislation and NDDB by the House of Commons Standing Committee on Public Safety and National Security (SECU Report, June 2009) and government acceptance in principle of the SECU Report's recommendations in October 2009.
2009	OCTOBER	Full proclamation of Bill C-14 (Statutes of Canada 2009, c. 22). The Bill amended the *Criminal Code* by adding three offences to the list of primary compulsory offences.

2010	JUNE	Parliamentary Statutory Review of the DNA legislation and NDDB by the Senate Standing Committee on Legal and Constitutional Affairs (Report–June 2010). The Government response in December 2010 noted that recommendations requiring legislative change are "in broad agreement" with those made by SECU and that operational recommendations would require broader discussion.
2010	JUNE	Proclamation of Bill C-268 (Statutes of Canada 2010, C. 3). The Bill amended the *Criminal Code* by adding one offence to the list of primary presumptive offences.
2011	APRIL	Proclamation of Bill S-2 (Statutes of Canada 2010, c. 17). The Bill amended the *Criminal Code* to make DNA sampling mandatory for convicted sex offenders and added six offences to the list of primary offences (4 compulsory and 2 presumptive). Convicted sex offenders must also be registered in the National Sex Offender Registry.
2012	AUGUST	Proclamation of Bill C-10 (Statutes of Canada 2012, C. 1). The Bill amended the *Criminal Code* by adding two offences to the list of primary compulsory offences.
2013	JULY	Proclamation of Bill S-7 (Statutes of Canada 2013, C. 9). The Bill amended the *Criminal Code* by adding four offences to the list of primary presumptive offences.
2014	JUNE	Proclamation of Bill C-394 (Statutes of Canada 2014, C. 17). The Bill amended the *Criminal Code* by adding one offence to the list of primary presumptive offences.
2014	DECEMBER	Proclamation of Bill C-36 (Statutes of Canada 2014, C. 25). The Bill amended the *Criminal Code* by adding six new primary mandatory offences, four new presumptive offences and a new offence to the list of secondary listed (discretionary) offences. Also, the Bill created a class of primary mandatory historical offences and primary presumptive historical offences.
2014	DECEMBER	Royal Assent of Bill C-43 (Statutes of Canada 2014, C. 39). The Bill amends the *DNA Identification Act* to expand the national use of DNA analysis so it could be used in missing persons' investigations. Five new indices within the NDDB will eventually be created: three that will support humanitarian efforts and two that will strengthen existing operations.

APPENDIX : B
DEFINITIONS OF DESIGNATED OFFENCES

PRIMARY COMPULSORY OFFENCES

This category includes offences for which the court is compelled to make an order such as murder, manslaughter, aggravated sexual assault, sexual assault, child pornography and robbery. For a complete list of offences that fall under this category, refer to paragraph (a) and (c.02) under the definition of "primary designated offences" in section 487.04 of the *Criminal Code*.

PRESUMPTIVE PRIMARY OFFENCES

For these offences, the court shall make an order unless the offender convinces the court that the impact of such an order on his/her privacy and security of the person is "grossly disproportionate" to the public interest in the protection of society and the proper administration of justice. Examples of offences included in this category are: breaking and entering a dwelling-house and hostage taking. For a complete list of offences that fall under this category, refer to paragraphs (a.1) to (c.01) and (c.03) to (d) under the definition of "primary designated offence" in section 487.04 of the *Criminal Code*.

LISTED SECONDARY OFFENCES

For these offences, the court may, on application by the prosecutor, make an order if it is satisfied that it is in the best interests of the administration of justice to do so. Examples of offences included in this category are: breaking and entering a place other than a dwelling-house, assault and indecent acts. For a complete list of offences that fall under this category, refer to paragraphs (c) and (d) and subparagraph (e)(ii) under the definition of "secondary designated offence" in section 487.04 of the *Criminal Code*.

GENERIC SECONDARY

For these offences, the court may, on application by the prosecutor, make an order if it is satisfied that it is in the best interests of the administration of justice to do so. All the other non-listed *Criminal Code* offences, including certain *Controlled Drugs and Substances Act* offences that are prosecuted by indictment for which the maximum punishment is imprisonment for five years or more, fall under this category of offences. Examples of offences included in this category are: possession of

explosive without lawful excuse, pointing a firearm, dangerous driving, dangerous driving causing bodily harm, causing death by criminal negligence, theft over $5,000, and drug related offences (e.g. trafficking and possession for the purpose of trafficking, importing and exporting and production of substances) which fall under sections 5, 6 and 7 of the *Controlled Drugs and Substances Act*.

For more information, refer to paragraphs (a) and (b) and subparagraph (e)(i) under the definition of "secondary designated offence" in section 487.04 of the *Criminal Code*.